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12-AUG-1993;
25-AUG-1993;
03-DEC-1993;
07-MAR-1994;
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                                                                                                                                                                                                                                                                                                                                                                      Antigen-specific peripheral immune tolerance; flt3-ligand; immunogenic; autoimmune disease; organ transplantation; for
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                                                                                                                                                                   immunomodulator; immunosuppressive; cytostatic; antianemic; anti-HIV; neuroprotective; antiallergic; fit3 ligand; fit5-L; wiid type; allergy; cell surface tyrosine kinase receptor; hematopoletic progenitor cell; cellular expansion; cellular differentiation; natural killer cell; cancer; dendritic cell; immune response; autoimmunity; immunosuppression cancer; dendritic cell; immune response; autoimmunity; immunosuppressions cancer; dendritic cell; immune response; autoimmune response; autoimmunity; immunosuppressions cancer; dendritic cell; immune response; autoimmune response; autoimm
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                                                                                                                                             myelodysplasia; aplastic anemia; HIV infection; lymphoma; neuroblastoma;
                                                                                                                                                                                                                                                                                                                                                      Full length wild type human flt-3 protein.
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Maximum DB seq length: 200000000
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          420100
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      A_Geneseq_19Jun03:*

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Maximum Match 100%
Listing first 45 summaries
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2: /SIDSI/gcgdata/geneseq/geneseqp-embl/AA1981 DAT:
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                                                                                                                                                                                                     Length
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  AAR67541
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Compugen Ltd
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C neoformans antiq
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Human flt3L prote:
Human flt3L polype
Secreted human pro
Human flt-3 ligand
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ALIGNMENTS

RESULT 1 AAR67541 25-MAR-2003 05-AUG-1995 AAR67541 standard; Protein; 235 07 - DEC - 1994 Domain Domain Key Homo sapiens. Flt-3 ligand; flt3-L; anemia; cancer; AIDS; gene therapy Human flt-3 ligand. AAR67541; EP627487-A2 Domain Peptide (updated)
(first entry) /label- Sig_peptide /note- "signal peptido may extend to position 27..182 /label= Extracellular_domain /note= "extracellular domain position 28" /label= Cytoplasmic_domain /label= Transmembrane_domain 206..235 183..205 Location/Qualifiers may

25-JUN-1999; 13-JAN-2000

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The invention relates to novel soluble flt3 ligand (flt3-L) polypeptides which exhibits increased or decreased biological activity relative to the full length wild type (this sequence) or mature (ANK9720) flt3-L polypeptides. The flt3-L protein binds cell surface tyrosine kinase receptors and regulate growth and differentiation of hematopoietic progenitor cells. The flt3-L protein can be used to induce cellular expansion (especially in vivo) or differentiation, e.g. in hematopoietic, natural killer (NK) or dendritic cells, especially in the presence of growth factors such as interleukins, colony stimulating factors or protein kinases. The protein can also modulate, augment or enhance a patient's immune response and can be used to treat a nimmine disorder (e.g. allergy, autoimmunity or immunosuppression). The protein may be used to treat a pathological condition e.g. myelodysplasia, aplastic anemia, HIV infection, breast, small cell lung, testicular or applastic anemia, HIV infection, breast, small cell lung, testicular or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mutant soluble flt3 ligand polypeptide used in cellular expansion, immune response stimulation or treatment of pathological conditions contains amino acid substitutions at positions 8, 84, 118 or 122 \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-JUL-1998;
Flt-3 ligand; Fms-like tyrosine kinase; human; vaccine;
immunothorapy; therapy; tumour; cancer; melanoma; gliom
lymphoma; autoimmune disease; infection; gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 72-73; 90pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IMMV ) IMMUNEX CORP.
                                                                                                                                                                                                                                     AAB20192 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ovarian cancer, lymphoma, multiple myeloma, neuroblastoma or acute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000-182115/16
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235; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MTVLAPAMSPTTYLLLLLLLSGLSGTQDCSFQHSPISSDFAVKIRELSDYLLQDYPVTV 60
HTTLAPAMSPTTYLLLLLLSGLSGTQDCSFQHSPISSDFAVKIRELSDYLLQDYPVTV 60
                                                                                                                                                                                                                                                                                                                                                    APQPPLLLLLLPVGLLLEAAAWCLHWQRTRRTPRPGEQVPPVPSPQDLLIVEH 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RFVQTNISRLIQETSEQLVALKPWITRQNFSRCLELQCQPDSSTLPPPWSPRPLEA:APT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ASNLQDEELCGGLWRLVLAQRWMERLKTVAGSKMQGLLERVNTEIHFVTKCAFQPPPSCL
                                                                                                                                                                                                                                                                                                                                                                                                   APQPPLLLLLLPVGLLLLAAAWCLHWQRTRRRTPRPGEQVPPVPSPQDLLLVEH 235
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ilarity 100.0%;
Conservative 0
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                                                                                                                                                                                                                                     Protein; 235 AA
                                                                                                                                            entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 1242; DB 21; Length 235;
Pred. No. 4.9e-109;
D; Mismatches 0; Indels 0;
                           glioma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
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    밁
                                                                                                                                                                                      Query Match
Best Local Sin
Matches 235;
                                                                                                                                                                                                                                                                                                                                               compositions comprising the polynucleotides are useful for suppressing turcour growth in a manmal. The turour is melanoma, glioma or lymphoma, particularly B-cell lymphoma. They can also be used for the prophylactic and/or therapeutic treatment of:

(a) bacterial (e.g. Bacillus infections), viral (e.g. hepatitis B and C in humans), parasitic (e.g. malaria) and fungal infections;

(b) autoimmune diseases (e.g. malaria) and fungal infections;

(c) cancer: and (d) Anjeszky's disease in pigs. Various other examples of these diseases are given in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polynucleotide may encode the present full-length human Flt-3 ligand polypeptide, or amino acids 27-160, 1960, 27-185, 1-185, or 27-235 of the ligand. The polynucleotides are incorporated into the cells of the vertebrate in vivo, and a prophylactically or therapeutically effective amount of Flt-3 ligand and 1 or more antigens or cytokines is produced in vivo. Pharmaceutical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      immune response of a vertebrate to an antigen or a cytokine by administering in vivo, into a tissue of a vertebrate, a FIL-3 ligand-encoding polynucleotide, and lor more antigen or cytokine-encoding polynucleotides. The FIL-3 ligand-encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immunogenic compositions comprising Fit-3 ligand encoding polynucleotide and one or more antigen, or cytokine encoding polynucleotides, useful for suppressing tumour growth and for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-123319/13.
N-PSDB; AAF30310.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Doma in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim
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                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  autoimmune diseases (e.g. rheumatoid arthritis)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-JUL-1999;
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                                                                                                                                                                                                                                                                                                                           specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence is that of human Fms-like tyrosine kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2; Page 132-133; 149pp; English
  61
                        61 ASNIQDEELCGGLWRLVLAQRWMERLKTVAGSKWQGLLERVNTEIHFVTKCAFQPPPSCL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ligand).
                                                                                                                                                                                                               Similarity
    ASNLQDEELCGGLWRLVLAQRWMERLKTVAGSKMQGLLERVNTEIHFVTKCAFQPPPSCL
                                                                                                                      MTVLAPAWSPTTYLLLLLLLSGLSGTQDCS+OHSPISSDFAVKIRELSDYLLQDYPVTV
                                                                                             MIVLAPAWSPITYLLLLLLSSGLSGIQDOSFQHSPISSDFAVKIRELSDYLLQDYPVIV
                                                                                                                                                                                                                                                                                    235
                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                    AA;
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27...235
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= Transmembrane_domain
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/label=_Extracellular_domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention
                                                                                                                                                                                                            100.0%;
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                                                                                                                                                                                           0
                                                                                                                                                                                      Score 1242; DB 22;
Pred. No. 4.9e-109;
0; Mismatches 0;
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                                                                                                                                                                                                                                     Length
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RESULT 4 AAB20192

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Gaps

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Human 14-MAY-2001 200 υb 20 밁

> 61 61

121

Query Match Best Local

Local

Sequence

Matches

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RESULT 5
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                                                                                                                                                                                                                                                                                                      The present invention relates to a new method for treating a tumour-bearing subject. The method involves administering a combination of 2 to 5 agents comprising dendritic cell mobilisation factor, dendritic cell maturation agent, tumour-killing agent, T cell enhancing factor or activated, antigen-specific T cells. The method is useful for treating tumours or cancers in a subject e.g. skin cancer, prostate cancer, liver cancer, tumours of the bone, brain or spinal cord, actinic keratosis, or cervical intraepithelial neoplasia. The present amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Treating an individual with tumours of cancers, e.g. liver can brain tumour, by administering a combination of dendritic cell populations, T cell enhancing factors and activated, antigen-s
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                                                                                                                                                                                      from infection with a pathogenic or opportunistic organism. The method of involves administering a combination of two to five agents comprising: CC (a) dendritic cell mobilisation factor; (b) dendritic cell maturation cor (c) dendritic cell mobilisation agent; (d) T cell enhancing factor; (c) dendritic cell activation agent; (d) T cell enhancing factor; (d) T cell enhancing factor; (e) activated, antigen-specific T cells. The methods are useful for treating an individual at risk for or suffering from infection with a classific organism, e.g. viruses (e.g. HIV), bacteria (e.g. M. tuberculosis), yeast, fungi (e.g. C. albicans) or protozoa (e.g. C. cruzi, which causes Chaga's disease). The methods are especially cuseful for treating an individual suffering from immunosuppression by cenhancing a lymphocyte-mediated immune response. In particular, the method is useful for treating inflammations, chickenpox, oral or genital complete or cell suseful for treating inflammations, chickenpox, oral or genital networks, mononucleosis, multifocal leukcencephalopathy, hepatitis, Alics, or cell leukemia or T cell lymphoma. The activated antigen-presenting condensitic cells are useful as a vaccine adjuvant. The present sequence dendritic cells and useful as a vaccine adjuvant, that can be used as a condensitic cell mobilisation factor.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Treating an individual suffering from infection, e.g. inflammation, chickerpox or AIDS, by administering a combination of dendritic cell mobilization factor or maturation agent, T cell enhancing factor and
                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to treating an individual at risk for or suffering from infection with a pathogenic or opportunistic organism. The method
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                                                                                               Score 1242; DB 23;
Pred. No. 4.9e-109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      English.
                                                                             Mismatches
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                                                                                                                DB 23;
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RESULT 8
AAG79949
ID AAG7
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                      Invention as they show high levels of similarity to the secreted 20 peptide of the invention. The secreted protein is related to the 20 tyrosine kinase receptor ligand subfamily. This protein effects 20 protein phosphorylation. The human secreted peptides are useful in 20 the peptide sequences, to raise antibodies or to elicit immune response, 20 as reagents in assays that determine the levels of protein in biological 21 thids, and as markers for tissues where the corresponding protein is 22 expressed. The peptides and the antibodies are useful in drug screening 22 cassays, tissue typing and pharmacogenomic analysis. The nucleic acid 22 molecules are useful as probes, primers and chemical intermediates in 22 conjugical assays, for constructing recombinant vectors, and expressing 23 cantigenic portions of the protein. The peptide and nucleic acid 25 conjugical assays, for constructing recombinant vectors, and expressing 25 cancigenic portions of the protein. The peptide and nucleic acid 26 cagents that modulate human secreted peptide activity in cells and 26 constructions of the secreted peptide, such as in kidney, blood, 25 lung, brain glioblastomas, prostate, colon or leukocytes.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             New isolated human secreted peptide and nucleic acids, useful for the development of human therapeutics and diagnostic compositions, drug screening assays, tissue typing and pharmacogenomic analysis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gene: secreted: tyrosine kinase receptor ligand; sabfamily: phosphorylation: kidney: blood; lung; brain glioblastoma; prostate:
                                                                                                                                                                                                                                                                                                                                                                                       The sequences given in AAG79949-50 are included in the scope of the
                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Fig 2A; 66pp; English.
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Query Match Best Local Similarity

100.0%;

Score Pred.

1242; DB 24; No. 4.9e-109;

Length 235;

Sequence

235 AA;

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03-DEC-1993;
07-MAR-1994;
                                                                                                                                                                                                                                                                                                                           11-MAY-1994;
24-JUN-1996;
24-MAY-1993;
  extraceliular
                          (flt-3 L) |
coli DH10B
                                                                                                 New antibody binding mouse flt-3 ligand, useful for screening, diagnostic and biological assays in disorders with elevated serum levels of flt-3 ligand, such as Fanconi's and myelodysplastic syndrome, aplastic and refractory anemia
                                                                                                                                                                                                                            (EYMA/)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human Flt-3 Ligand, Flt-3 L.
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              Accession
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                                                                                                                                                                                                    Lyman
                                                                                                                                                                                                                                                                                                                  12-AUG-1993;
                                                                                                                                                                                                                                                                          3-DEC-1993;
7-MAR-1994;
invention relates to an antibody that binds to mouse flt-3 liqand tr-3 L) encoded by the cDNA insert in vector S:HAV-E0410 in Escheric i DH10B cells having American Type Culture Collection (ATTC) ression No. 69286, where the ligand comprises the truncated racellular domain of mouse flt-3 L. The methods and compositions as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       marrow transplant; cytoreductive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cell mobilisation.
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                                                                           Page 15-16;
                                                                                                                                                                                                   Beckmann
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93US-0068394
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93US-0112758
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93US-0209502
95US-0444632
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                                                                         18pp; English
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RESULT 10
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AC AAG79
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chronic myelomonocytic leukaemia, aplastic anaemia, Fanconi's anaemia and plycythaenia. Flt3-L is also useful in allogeneic, syngeneic or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      useful for screening, diagnostic and biological assays in disorders having elevated serum levels of flt-3 ligand, such as cancer, cytopaenia, myelodysplastic syndromes, stem cell disorders, refractory anaemia,
                                                                                                                                                                                   New isolated human secreted peptide and nucleic acids, useful development of human therapeutics and diagnostic compositions, screening assays, tissue typing and pharmacogenomic analysis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO2003002138-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protein:
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Pred. No. 4.
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1.9e-109;
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The sequences given in AAG79949-50 are included in the scope of invention as they show high levels of similarity to the secreted peptide of the invention. The secreted protein is related to the tyrosine kinase receptor ligand subfamily. This protein effects

2в:

66pp;

English.

1995-006787/01.

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RESULT 11
AAR66175
IJ AAR66
XX AAR66
XX 25-MA
DT 10-AU
XX HUMAN
XX HUMAN
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XX HO
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Best Local S
Matches 234
                                                                                                                                                                                     19-MAY-1993;
07-JUL-1993;
16-JUI-1993;
13-AUG-1993;
13-AUG-1993;
24-AUG-1993;
19-NOV-1993;
03-DEC-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                expressed. The peptides and the antibodies are useful in drug screening assays, tissue typing and pharmacogenomic analysis. The nucleic acid molecules are useful as probes, primers and chemical intermediates in biological assays, for constructing recombinant vectors, and expressing antigenic portions of the protein. The peptide and nucleic acid molecules are useful in the identification of therapeutic proteins and may serve as models or targets for the development of human therapeutic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein phosphorylation. The human secreted peptides are useful in substantial and specific assays related to functional information of the peptide sequences, to raise antibodies or to elicit immune response, as reagents in assays that determine the levels of protein in biological fluids, and as markers for tissues where the corresponding protein is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
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10-AUG-1995
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                                   Birnbaum
                                                                                                                                                                                                                                                                                                                                                                                                                                     18-MAY-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Flt3 ligand; tyrosine kinase receptor ligand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human S86/S109 Flt3 ligand
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                                                                                          INST NAT
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                                'n
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(first en
                             Culpepper JA,
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93US-0089263.

93US-0092549.

93US-0106340.

93US-0112391.

93US-0155111.

93US-0162413.
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                                                                                          SANTE &
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Pred. No. 1.5e-108;
                                                                                                                           MEDICALE
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                                FD;
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RESULT 12
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   PRODUCT STANDARD SOLVEN SOLVEN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pME18S, was screened with an 800 by frayment derived from mouse clone Til8. This fragment encompasses the coding region conserved between two mouse clones, Til8 and Til0. Approx. 20 positive clones were selected and partially sequenced. Two clones, S86 and S109, were found to be approx. 75% homologous to the mouse clones over the first 163 AAs. Clone S86 continued to show homology to Til0 until the stop codon, although to a lesser degree, for an overall homology of 66%. Clones Til8 and S109 do not show homology to each other or to the other clones after mouse residue 163 (human residue 160). An additiona mouse clone designated MBB has a 29 AA insert at the junction between the common and divergent portions of the mouse ligand. (Updated on 25-MAR-2003 to correct PN ficid.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Sim
Matches 234;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB; AAQ79642
                                                                                                                                                                                                                                                                                                                                                  Flt-3 ligand; Ems-like tyrosine kinase; human; vaccine
immunotherapy; therapy; tumour; cancer; melanoma; glic
lymphoma; autoimmune disease; infection; gene therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human Flt-3 ligand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB20194 standard; Protein; 235
                           Doma i n
                                                                                                                                              Protein
                                                                                                                                                                                                      Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APQPPLLILLLIPVGLLILAAAWCIHWQRTKRKIPRPGEQVPPVPSPQDLLLVEH
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                                                                                                                                              /label=
27..235
                                                                                /label- Mature_protein
27..182
                        /label- Extracellular_domain
183..205
                                                                                                                                                                                                                                  Location/Qualifiers
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Transmembrane_domain
                                                                                                                                                                       Signal_peptide
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Pred. No. 1
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                                                                                                                                                                                                                                                                                                                                                                                 human; vaccine;
melanoma; glioma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 16;
.8e-108;
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RESULT 13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polynucleotide may encode the present full-length human Fit-3 cliquand polypeptide, or amino acids 27-185, 1-185, 27-235 or 1-235 of the Fit-3 liquand. The polynucleotides are incorporated into the cells of the vertebrate in vivo, and a prophylactically or therapeutically effective amount of Fit-3 liquand and 1 or more antigens or cytokines is produced in vivo. Pharmaceutical compositions comprising the polynucleotides are useful for suppressing tumour growth in a mammal. The tumour is melanoma, glioma or lymphoma, particularly B-cell lymphoma. They can also be used for the prophylactic and/or therapeutic treatment of the bacterial (e.g. Bacillus infections), viral (e.g. hepatitis 3 and C in humans), parasitic (e.g. malaria) and fungal infections; (b) autoimmune diseases (e.g. rheumatoid arthritis and osteoarthritis); (c) cancer; and (d) Aujeszky's disease in pigs.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present sequence is that of human Frs-like tyrosine kinase (Flt-3 ligand). The invention is directed to enhancing the immune response of a vertebrate to an antigen or a cytokine by administering in vivo, into a tissue of a vertebrate, a Flt-3 lightly state of the control 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Immunogenic compositions comprising Fit-3 ligand encoding polymuclectide and one or more antigen, or cytokine encoding polymuclectides, useful for suppressing tumour growth and for treating autoimmune diseases (e.g. rheumatoid arthritis).
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                                                                                                                                                      APQPPLLLLLLLPVGLLLLAAAWCLHWQRTRRRTPRPGEQVPPVPSPQDLLLVEH
                                                                                                                                                                                                                                                                                                                                                 RFVQTNISRLLQETSEQLVALKPWITRQNFSRCLELQCQPDSSTLPPPWSPRVLEATAPT
                                                                                                                           APQPPLLLLLLPVGLLLLAAAWCLHWQRTRRRTPRPGEQVPPVPSPQDLLLVEH
                                                                                                                                                                                                                                    REVOTNISRLLQETSEQLVALKPWITRQNESRCLELQCQPDSSTLPPPWSFRFLEATAPT
                                                                                                                                                                                                                                                                                                                                                                                                             ASNLQDEELCGGLWRLVLAQRWMERLKTVAGSKMQGLLERVNTEIHFVIKCAFQPPPSCI.
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Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Immunomodulator; immunosuppressive; cytostatic; antianemic; anti-HIV; :europrotective; antiallerqu; fit3 ligand; fit3-L; wild type; allergy; cell surface tyrosine kinase receptor; hematopolotic progenitor cell; cellular expansion; cellular differentiation; natural killer cell; cancer; dendritic cell; immune response; autoimmunity; immunosuppression; cancer; dendritic cell; immune response; autoimmunity; immunosuppression;
                                                                                                                                                                                                                                                                                                                                                                                      modulate, augment or enhance a patient's immune response and can be to treat an immune disorder (e.g. allergy, autoimmunity or immunosuppression). The protein may be used to treat a pathological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 4; Page 79-80;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mutant soluble flt3 ligand polypeptide used in cellular expansion, immune response stimulation or treatment of pathological condition contains amino acid substitutions at positions 8, 84, 118 or 122
                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                myeloma, neuroblastoma or acute leukemia.
                                                                                                                                                                                                                                                                                                                                                 condition e.g. myelodysplasia, aplastic anemia, HIV infection, brosmail cell lung, testicular or ovarian cancer, lymphoma, multiple
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TTRQNFSRCLEI@CQPDSSTLPPPWSPRPLEATAPTAPQPPLLLLLLLLPVGLTLLLAAAWC
                                                          RLKTVAGSKMOGLLERVNTETHFVTKCAFQPPPSCLRFVQTNTSRLLQETSEQLVALKPW
                                                                                                                     SGTQDCSFQHSP1SSDFAVKIRELSDYLLQDYPVTVASNLQDEELCGGLWRLVLAQRWME
                                                                                                                                             SGTODCSFQESPISSDEAVKIRELSDYLLODYPVTVASNLODEELCGGIMRLVI.AORWME
                                     RLKTVAGSKMQGLLERVNTEIHFVTKCAFQPPPSCLRFVQTNISRLLQETSEQLVALKPW
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                                                                                                                                                                                                                         Score 1124; DB 21; pred. No. 5.9e-98;
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ITRONESRCLELQCQPDSSTLPPPWSPRPLEATAPTAPQPPLLLLLLLLPVGLLLLAAAWC 181

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RESULT 14
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                                                                                                                                                                         CC This sequence represents a rearranged human fit-3 receptor agonists of CC the invention. The agonists have a modified fit-3 ligand amino acid CC sequence. The agonists are used to stimulate production of haematopoietic CC cells in vivo (e.g. in a subject about to donate blood) or for ex vivo CC expansion for subsequent transplantation, e.g. to reconstitute bone marrow after chemotherapy, disease etc., or to treat haematological CC disease such as drug-induced myelosuppression, defects caused by infections, burns or renal dialysis. Optionally ex vivo expanded cells CC infections, burns or renal dialysis. Optionally ex vivo expanded cells CC infections. The agonists can also be used in the treatment of tumours, CC infections. The agonists can also be used in the treatment of tumours, CC infections and antoimmune disease, when administered optionally with an CC cells for use as an immunising adjuvant for treatment disorders including acquired immune deficiency syndrome. Compared with native ligands, the CC and/or better physical properties such as solubility, stability or refolic efficiency, when used together with other stimulatory agents, the CC agonists provide a synergistic effect.
         Query Match
Best Local s
Matches 209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rearranged flt-3 receptor agonists and nucleic used to stimulate production of haematopoietic for treatment of haematological diseases, bone
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                                                                    recoptors and regulate growth and differentiation of hematopoietic progenitor cells. The fil3-L protein can be used to induce cellular expansion (especially in vivo) or differentiation, e.g. in hematopoletic, natural killer (NK) or dendriftic cells, especially in the presence of growth factors such as interleukins, colony stimulating factors or protein kinases. The protein can also modulate, augment or
                                                                                                                                                                                                                                                                                   Mutant
immune
                                                                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                                          Graddis IJ,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  multiple myeloma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer; dendritic cell; immune response; autoimmunity; immunosuppression;
myelodysplasia; apiastic anemia; HIV infection; lymphoma; neuroblastoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Immunomodulator: immunosuppressive; cytostatic; antianemic; anti-HIV; neuroprotective; antiallergic; flt3 ligand; flt3-1; wild type; allergy; cell surface tyrosine kinase receptor; hematopoietic propenitor cell; ceilular expansion; cellular differentiation; natural killer cell;
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                                                                                                                                                             the full length wild type (AAY69719) or mature (this sequence) flt3-L polypeptides. The flt3-L protein binds cell surface tyrosine kinase
                                                                                                                                                                                           The invention relates to novel soluble flt3 ligand (flt3-L) polypeptides which exhibits increased or decreased biological activity relative to
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                                                                                                                                                                                                                                                                 soluble flt3 ligand polypeptide used in cellular expansion, response stimulation or treatment of pathological conditions as amino acid substitutions at positions 8, 84, 118 or 122 -
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enhance a patient's immune response and can be used to treat an immune disorder (e.g. allergy, autolamiunity or immunesuppression). The protei may be used to treat a pathological condition e.g. myelodysplasia, aplastic anemia, HIV infection, breast, small cell lung, testicular or ovarian cancer, lymphoma, multiple myeloma, neuroblastoma or acute

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Result
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            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1: /cgn2_6/ptodata/1,

2: /cgn2_6/ptodata/1,

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/cgn2_6/ptodata/1/iaa/ABCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
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         US-08-243-545-6
US-08-993-962-6
US-09-106-841-6
US-09-109-100-1
PCT-US94-05365-6
US-09-109-100-10
US-09-109-100-17
US-09-109-100-17
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US-09-109-100-7
US-09-109-100-8
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US-09-322-409-23
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: Sequence 6, Application US/08243545
: Patent No. 5554512
: GENERAL INFORMATION:
   APPLICANT: Lyman, Stewart D.
   APPLICANT: Beckmann, M. Patricia
   TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
   NUMBER OF SEQUENCES: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Microsoft word, Version *5
CURRENT APPLICATION NUMBER: US/08/243,545
FILING DATE: 11-MAY 1994
CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: US 08/152,407
TELEFAX: (206) 233-0644
TELEFX: 756822
INFORMATION FOR SEQ ID NO: (
SEQUENCE CHARACTERISTICS:
LENGTH: 235 amino acids
                                                                                                                                                                                                                                                                                                       FILING DATE: 03-DEC-1993
APPLICATION NUMBER: 08/111.758
FILING DATE: August 25, 1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/106,463
FILING DATE: August 12, 1993
CLASSIFICATION: 435
PRIOR APPLICATION: 435
PRIOR APPLICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                         REFERENCE/DOCKET NUMBER: 28
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 587-0430
                                                                                                                                                                                                                     APPLICATION NUMBER: 08/068,394
FILING DATE: MAY 24, 1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 51 Univ
CITY: Seattle
STATE: Washingt
                                                                                                                                                                           NAME: Malaska, Stephen L. REGISTRATION NUMBER: 32,6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: Apple Macintosh OPERATING SYSTEM: Macintos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Stephen L. Malaska, Immunex Corporation STREET: 51 University Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER: 08/111.758
August 25, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Macintosh 7.0.1
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                                                                                                                                                                                32,655
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                                                                                                                                                             2813-C
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RESULT 2
US-08-993-962-6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 6, Applic Patent No. 5843423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
Lyman, Stewart D.
APPLICANT: Beckmann, M. Patricia
APPLICANT: Beckmann, M. Patricia
TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIDIM TYPE: Floppy disk
COMPUTER: Apple Macintosh
COMPUTER: Apple Macintosh
COMPUTER: Apple Macintosh
COMPUTER: APPLICATION DATA:
APPLICATION NUMBER: US/08/993,962
                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: (
FILING DATE: August :
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                          FILING DATE: Decembe
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
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CORRESPONDENCE ADDRESS:
                                             ATTORNEY/AGENT INFORMATION:
NAME: Malaska, Stephen L.
REGISTRATION NUMBER: 32,655
REFERENCE/DOCKET NUMBER: 2813-C
TELECOMMUNICATION INFORMATION:
                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: May 24,
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 51 University Street
CITY: Seattle
STRIE: Washington
                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/16;
FILING DATE: December 3, 1939
APPLICATION NUMBER: 08/111,79
FILING DATE: August 25, 1933
CLASSIFICATION: 424
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mes 235; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid
TELEFAX: (206) 233-0644
TELEX: 756822
                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
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                                  (206)
                                                                                                                                                                                                                  NUMBER: 08/106,463
August 12, 1993
                                                                                                                                                                                                                                                                                                                                                                                          UMBER: US/08/993,962
December 18, 1997
                                                                                                                                                                                                                                                                                                         December 3, 1993
UMBER: 08/111,758
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100.0%; Pr
                                                                                                                                                  R: 08/068,394
24, 1993
                                  587-0430
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Pred. No. 2.3e-117;
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                                                             FILING DATE: December 3, 1993
APPLICATION NUMBER: 08/111/758
FILING DATE: AUGUST 25, 1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/106,463
FILING DATE: AUGUST 12, 1993
PRIOR APPLICATION UMBER: 08/068,394
FILING DATE: MAY 24, 1993
ATTORNEY/AGENT INFORMATION:
NAME: MALASKA, Stephen L.
REGISTRATION NUMBER: 32,655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CFNERAL INFORMATION:
APPLICANT: Lyman, Stewart D.
APPLICANT: Beckmann, M. Patricia
APPLICANT: Beckmann, M. Patricia
TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                        COMPUTER: Apple Macintosh 7.0.1 OPERATING SYSTEM: Macintosh 7.0.1 SOFTWARE: Microsoft Word, Version CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/160,841
        REGISTRATION NUMBER: 32,655
REFERENCE/DOCKET NUMBER: 2813-C
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 587-0430
                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 98101
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPCLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                      CLASSIFICATION:
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: Stephen L. Malaska, Immunex Corporation
STREET: 51 University Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 51 Uni
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Application 05/09160841 6190655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H: 235 amino acids amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APQPPLLLLLLPVGLLLLAAAWC.HWQRTRRRTPRPGEQVPPVPSPQDLLLVEH 235
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REVQINISRILQETSEQLVALKPWITRONESRCLELQCOPDSSTLPPPWSPRPLEATAPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Washington
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
(206) 233-0644
                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 1242; DB 100.0%; Pred. No. 2.3e-11
                                                                                                                                                                                                                                                                        US/08/162,407
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Maximum
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                on:
                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
DB
                                                                                                                                                                                                                                                             Score
                                                                                                                                   seq length: 0
                                                                                                                                                                                                                                                          Query
Match
         100.0
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100.0
100.0
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89.4
89.4
89.4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              September 15, 2003, 15:57:23; Search time 40.3433 Seconds (without alignments) 849.940 Million cell updates/scc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        541936 segs, 145912426 residues
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1242
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// cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
// cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
// cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep:*
// cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep:*
// cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep:*
// cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
// cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep:*
// cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep:*
// cgn2_6/ptodata/1/pubpaa/US10C_MEW_PUB.pep:*
// cgn2_6/ptodata/1/pubpaa/US10C_MEW_PUB.pep:*
// cgn2_6/ptodata/1/pubpaa/US10C_MEW_PUB.pep:*
// cgn2_6/ptodata/1/pubpaa/US10C_MEW_PUB.pep:*
// cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
// cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
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Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MTVLAPAWSPTTYLLLLLLL.....RPGEQVPPVPSPQDLLLVEH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/PC7_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
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US-08-94-468-6
US-09-448-378-1
0 US-09-983-806-6
0 US-09-904-536-6
2 US-10-314-035-6
5 US-10-241-927-6
1 US-09-904-536-10
1 US-09-904-536-12
1 US-09-904-536-12
1 US-09-904-536-17
1 US-09-904-536-17
1 US-09-904-536-11
1 US-09-904-536-11
1 US-09-904-536-11
1 US-09-904-536-11
1 US-09-904-536-11
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Sequence 1, Appli
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Sequence
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Sequence
Sequence
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6, Appli
6, Appli
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2, Appli
10, Appli
18, Appli
12, Appli
14, Appli
14, Appli
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RESULT 1
US-08-994-468-6
US-08-994-468-6
; Sequence 6, Application US/08994468
; Publication No. US20030148516A1
; Publication No. US20030148516A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                        COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Ploppy disk

COMPUTER: Apple Macintosh

OPERATING SYSTEM: Macintosh

OPERATING DATE: 19-Dec-1997

CLASSIFICATION NUMBER: US/08/94,468

FILING DATE: OPERATION

APPLICATION NUMBER: 08/162,407

FILING DATE: August 12, 1993

APPLICATION NUMBER: 08/06,463

FILING DATE: August 12, 1993

APPLICATION NUMBER: 08/068,394

FILING DATE: May 24, 1993

APTORNEY ACCENT TUROSMETON.
                    ATTORNEY/AGENT INFORMATION:
NAME: Malaska, Stephen L.
REGISTRATION NUMBER: 32,6
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TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
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STATE: Washington
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BER: 32,655
NUMBER: 281
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  2813-C
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GENERAL INFORMATION:

APPLICANT: Brasel, Kenneth
TITLE OF INVENTION: Dendritic Cell Stimulatory Factor
FILE REFERENCE: 2836 D
CURRENT APPLICATION NUMBER: US/09/448,378
CURRENT FILING DATE: 199-11-23
NUMBER OF SED ID NOS: 2
SOFTWARE: PatentIn version 3.0
SEQ ID NO! SEQ ID NO: 255
TYPE: PRT
ORGANISM: Homo sapiens
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Best Local Similarity
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Matches 235; Conserv
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TELEPHONE: (206) 587-0430
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                             APQPPLLLLLLLPVGLLiJLAAAWCLHWQRTRRRTPRPGEQVPPVPSPQDLLLVEH 235
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APOPPILLLILLPYGILLLAAAWCIHWQRTRRRTPRPGEQVPPVPSPQDLLIVEH 235
                                                                                                                               ASNLQDEELCGGLWRLVLAQRWMERI.KTVAGSKMQGLLERVNTEIHFVTKCAFQPPPSCL
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TOPOLOGY: linear seguence Description: SEQ ID US-09-983-806-6
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INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 235 amino acids
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FILING DATE: 19-MAY 3995
APPLICATION NUMBER: US 08/162,407
FILING DATE: 03-DEC-1993
APPLICATION NUMBER: 08/111,758
FILING DATE: AUGUST 25, 1993
APPLICATION NUMBER: 08/106,463
APPLICATION NUMBER: 08/106,463
APPLICATION NUMBER: 12, 1993
APPLICATION NUMBER: 08/68,394
FILING DATE: May 24, 1993
ATTORNEY/AGENT INFORMATION:
NAME: Malaska, Stephen L.
REGISTRATION NUMBER: 32,655
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Local _
235;
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TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
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OPERATING SYSTEM: Macintosh 7.9.1
SOFTMARE: Microsoft Word, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/983,806
FILING DATE: 25-Oct. 2001
CLASSIFICATION: 530
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COMPUTER READABLE FORM:
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181
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STATE: Washington
                APQPPULLLLLEPVGLILLLAAAWCI.HWORTRRETPRPGFQVPPVPVPSPQDLLLVEH 235
                                                                                                                                                                                                                                       MTVLAPAWSPTTYLLLLLLLSSGLSGTQDCSFQHSP1SSDFAVKIRELSDYLLQDYPVTV
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  APOPPLILLLLLPVGLLLLAAAWCLHWQRTRRRTPRPGEQVPPVPSPQDLLLVEH 235
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TELEFAX: (206) 233-0644
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100.0%; Pred. No. 2.7e-103;
tive 0; Mismatches 0;
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq
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Perfect score:
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Match Length DB
 283308 seqs, 96168682 residues
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S43293
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splicing factor SF
                                                                                                                                                                                                                              flt3 ligand - huma
                                                                                                                                                                                                                                                       Description
                                                                                                                                                                             hypothetical prote
74K alpha trans-in
               prote
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ÛΥ	Qy	Qy Ob	Query M Best Lo Matches	A/litle Lic A/Reference A/Reference A/Reference A/Residues: A/Cross ref A/Note: the A/Note: the A/Introns:	A; Status A; Molecu A; Residu A; Cross A; Cross R; Hannun felt, A	A;Accession: 138440 A;Status: preliminary: translat A;Molecule type: mRNA A;Residues: 1-235 <res> A;Cross-references: EMBL:U03858 A;Cross-references: EMBL:U3858 A;Cross-references: EMBL:U3858 A;Cross-references: EMBL:U3858 A;Cross-references: EMBL:U3858 A;Cross-references: I38075; MUI A;Accession: 138075; MUI A;Accession: 138075; MUI A;Accession: 138075; MUI</res>	RESUL: 1 138440 flt3 ligand C:Species: H C:Joate: 29-M C:Accession: R:Lyman, S.D Blood 83, 27 A:Mile: Clo		Ω Ω Ω Ω Ω Ω Ω Ω Ω Δ Δ Δ Δ Δ Δ Δ Ω Ω Ω Ω
121 R	61 2 - 2	H H	atch cals	A; Ittle: Ligand for Ft A; Reference number: \$4 A; Accession: \$43292 A; Status: preliminary A; Molecule type: mRNA A; Rosidues: 1-71, 'A', 7 A; Rosidues: 1-71, 'A', 7 A; Cross-references: GE A; Mote: the authors tr C; Genetics: A; Introns: 11/3; 48/3;	.atus: preliminary, blecuie type: DNA sidues: 1-235 <exe coss-references: EXE conum, C.; Culpeppe: .A.; Maench, M.; F</exe 	sion: 13 s: preli le type les: 1-2 referen S.D.; s.T. 11 s.T. 11 s. Strum	ULT 1 1844) 13 ligand - human t3 ligand - human Species: Homo sapiens Date: 29-May-1998 #seq Accession: I3840; I39 Lyman, S.D.; James, L. Ood 83, 2795-2801, 199 Ood 83, 2795-2801, 199 Title: Cloning of the Reference number: 7384		82.5 82.5 82.5 81.5 81.5 81.5 81.5 81.5 81.5 81.5 81
FVOTNISH	SNIODEE	TVLAPAWS TVLAPAWS	imilarity ; Conserv		minary; : DNA : DNA 35 <re2> ces: EME culpeppex h, M.; K</re2>	minary: minary: mRNA s <ress 139="" 65-1172="" 65-1172,="" 67-1="" 67-5<="" ces:="" eme="" st-ocking="" stocking="" td=""><td>human no sapiens y-1998 *se 138440; I3 . James. 1 . James the</td><td></td><td></td></ress>	human no sapiens y-1998 *se 138440; I3 . James. 1 . James the		
RLLQETSE		SPTTYLLL	100. 100. ative	FIT3)FIK2 rece S43290; MSID: S43290; MSID: Y A 73-235 <hans SB:U04805; NII translated the translated the</hans 	translated	translate L:U03858; K: Dav 1995 Llysis of U75; MUID	iens (man) iens (man) is #sequence_revi i #39075; S4329 is, L.; Johnson, inche human homo ithe human homo		513 22 513 22 485 4 22 9588 2 1119 2 2096 2 2096 2 1306 2 1306 2 1306 2 1306 2
FVQTNISRLLQETSEQLVALKPWITRQNFSRCLELQCQPDSSTLPPPWSPRPLE	CGGLWRLVLAQRWMERLK 	MTVLAPAWSPTTYLLLLLLLSSGLSGTODCSFOHS . : : : : : :	0 3 3 4 0	941954; 941954; 0:q4838 e codos	ed from ; NID:ql mpbell, .; Nami)	ed from ; NID:94 vison, E human a D:960325	evision 2 3292 on, L.; E omologue	ALIGNMENT	D40829 J01484 T034460 T034460 C75460 T13593 T13593 T150995 A12016 A12016 FHHU JW0047 T13592 T13592
ONFSRCLEL	ERLKTVAGSKMQGLLEH 	ds#daspdc 	Score 1242; DB Pred. No. 5.1e- : Mismatches	MID: MID: PIDN for	MBL/ 36; McC1	; = F9 E	-May-1998 asel, K.; f the muz	MENTS	
QCQPDSSTI	TNA	SPISSDFAVKIRELS	2; Length 99; 0; Indels	kinase requ :614585i V:AAA17999.1 r residue 25	PIDN:AAA90949. anahan, T.; Zu Rennick, D.;	ΑΑ.» F. E3	<pre>#text_ch de Vries rine flt3 80375</pre>		
.PPPWSPRP	EIHFVTKCAFQ EIHFVTKCAFQ	RELSDYLLQD RELSDYLLQD	jth 235; els	iates ; PID as M	1; PI rawsk Ronca	PII î, I	ange 01- , P.: Es ligand:		activin receptor i activin receptor proline/leucine-ri hypothetical prote stromelysin 3 (EC hypothetical prote rolated to cytoske cysteine-rich exte cysteine-rich exte hypothetical prote probable transposa Ig epsilon chain C class I cytokinase hypothetical prote probable transposa Ig epsilon chain C class I cytokinase hypothetical prote hypothetical prote
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RFSULT 3
I39076
F113 ligand alternatively spliced isoform - human
C:Species: Homo sapiens (man)
C:Species: Homo sapiens (man)
C:Date: 29-May-1998 #sequence_revision 29-May-1998 #text_change 21-Jul-2000
C:Accession: I39076
R:Lyman, S.D.: Stocking, K.; Davison, B.; Fletcher, F.; Johnson, L.; Escobar, S.
Oncogene 11, 1165-1172, 1995
A:Title: Structural analysis of human and murine f1t3 ligand genomic loci.
A:Reference number: 139075; MUID:96032581; PMID:7566977
A:Accession: I39076
A:Status: preliminary: translated from GB/EMBL/DDBJ
A:Molecule type: DNA
A:Residues: 1-178 < RES>
A:Gross-references: EMBL:U29874; NID:91072036; FIDN:AAAA90950.1; PID:g1072039
C:Genetics:
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C:Date: 20-Oct-1994 #sequence_revision 10-Nov-1995 #text_change 17-Mar-1999
C:Accession: S43294
R:Hannum, C.: Culpepper, J.; Campbell, D.; McClanahan, T.; Zurawski, S.; Bazan, J.F.; ifelt, A.; Muench, M.; Kelner, G.; Namikawa, R.; Rennick, D.; Roncarolo, M.G.; Zlotnik, Nature 368, 643-448, 1994
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A:Molecule type: mRNA
A:Residues: 1-245 CHANA
A:Note: the authors translated the
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                           MTVLAPAWSPTTYLLLLLLLSSGLSGTQDCSFQHSPISSDFAVKIRELSDYLLQDYPVTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APQP-----PLLLLLLPVGLLLAAAWCLHWQRTRRRTPRPGEQVPPVPSP 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REVOINISELLQETSEQLVALKEWITRONESECLELQCQPGA---PRPQSPGPAACGALT
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      67.1%; ilarity 100.0%; Conservative
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73.08;
                                                                            0;
                                                                          Score 834; DB 2;
Pred. No. 3.2e-64;
0; Mismatches 0;
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A49265
A49265
Ligand precursor - mouse
fligifik-2 ligand precursor - mouse
C.Species: Mus musculus (house mouse)
C.Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #to
C.Accession: A49265; I49347; I49346; S43290
K.Lyman, S.D.; James, L.; Vanden Bos, T.; de Vries, P.
D.: Williams, D.E.; Beckmann, M.P.
Ce.l 75, 1157-1167, 1993
A.F.Title: Molecular cloning of a ligand for the flt3/f
A.Rocession: A49265
A.Accession: A49265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: DNA, A;Residues: 1-197,'L', 198-231 <RE2>
A;Residues: 1-197,'L', 198-231 <RE2>
A;Cross-references: EMBL:U29875; NID:g1072039; PIDN:AAA50951.1; PID:g1072040
A;Cross-references: EMBL:U29875; NID:g1072039; PIDN:AAA50951.1; PID:g1072040
A;Cross-references: EMBL:U29875; NID:g1072039; PIDN:AAA50951.1; PID:g1072040
A;Filhe: Ligand For FLT3/FLK2 receptor tyrosine kinase regulates growth of haematopoi
A;Reference number: S43290; MUID:94195428; PMID:8145851
A;Accession: S43290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A:Cross-references: GB:L23636; NID:g439441; PIDN:AAA39436.1; PID:g439442 R:Lyman, S.D.; Stocking, K.; Davison, B.; Fletcher, F.; Johnson, L.; Esco Oncogene 11, 1165-1172, 1995 A:Title: Structural analysis of human and murine flt3 ligand genomic loci A:Reference number: 139075; MUID:96032881; PMID:7566977 A:Accession: 149347 A:Status: preliminary; translated from GB/EMRI/DDBJ
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A; Residues: 1-197, 'L', 198-231 <HAN>
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A;Residues: 1-165, G',165,'HYAG' <RES>
A;Cross-references: EMBL:U29875; NID:g1072039; PIDN:AAA90952.1;
A;Accession: [49346]
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                                                                                                                                                                                                                             h 61.9%; Score 768.5; DB 2
Similarity 70.3%; Pred. No. 1.7e.58;
53; Conservative 17; Mismatches 43
                                                                                                                                                              VASNLQDEELCGGLWRLVLAQRWMERLKTVAGSKMQGLLERVNTEIHFVTKCAFQPPPSC
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                                                                                                                                         VAVNIQDEKHCKALWSLFLAQRWIEQLKTVAGSKMOTLLEDVNTEIHEVTSCTFQPLPEC
                                                                                                                                                                                                                                                      LREVQTNISHLLKUTCTQLLALKPCIGKACQNESRCLEVQCQPDSSTLLPPRSPIALEAT
                                                                                        I.REVOTNISRLLQETSEQLVALKPWITR--ONESRCLELQCQPDSSTLPPPWSPRPLEAT
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APTAPQPP---LLLLLLPVGLLLLAAAWCLHWQRTRRRTPRPGEQVPPVPSP
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Hannum C., Culpepper J., Campbell D., McClanahan T., Zurawski S.,
Bazan J.F., Kastelein R., Hudak S., Wagner J., Mattson J., Luh J
Duda G., Martina N., Peterson D., Monon S., Shanafeit A.,
Muench M., Kelner G., Namikawa R., Rennick D., Roncarolo M.G.,
Muench M., Kelner G., Namikawa R., Bennick D., Lee F.;
Zlotnik A., Rosnet C., Dubreuil P., Birnbaum D., Lee F.;
"Ligand for Ftrayfik2 receptor tyrosine kinase regulates growth
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P49772; Q640
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15 SEP-2003 (Rel. 42, Last annotation update)
SI cytokine precursor (Fms.related tyrosine kinase 3 ligand) (Flt3)
[19and] (Flt31).
                                                                                       "Identification of soluble and membrane-bound flt3 ligand generated by alternative splicing Oncogene 10:149-157(1995).
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Lyman S.D., Stocki
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McClanahan T., Culpepper J., Campbell D., Wagt
Franz. Bacon K., Mattson J., Tsai S., Lub J.,
Mattei M.-G., Rosnet O., Birnbaum D., Hannum C.
Submitted (APR-1996) to the EMBL/GenBank/DDBJ
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Lyman S.D., James L., Es
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SPTREMBL_23:*

Sp_bacteria

sp_bacteria

sp_fungi:*

Sp_human:*

Sp_human:*

Sp_mamma

Sp_mhc:*

Sp_pha;

10: Sp_pha;

10: Sp_ph

11: Sp_r

12: Sp_r

13: Sp_r

14: Sp_r

16: Sp_r

16: Sp_r

17: Sp_r

16: Sp_r

17: Sp_r

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19: Sp_r

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10: Sp_r
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      578
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110.5
100.5
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length: 2000000000
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Match Length DB
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667.6
667.2
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Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
sp_archeap:*
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sp_rodent:*
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Q96KD4
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O94G6B
Q8DKL7
Q8041BB
Q8VIM6
Q8VIM6
Q80775
Q81775
Q81775
Q90WH8
Q9C5T0
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Q9MZU9
Q9GKEO
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Odilo4 mus musculla Q8vch4 mus musculla Q8vch4 mus musculla Q9lgg6 oryza sativ Q8dkl7 synechoccon Q8l418 oryza sativ Q8vim6 mus musculla Q8gya4 arabidopsis Q8n775 homo sapien Q8h785 arabidopsis Q9dwh8 rat cytoreg Q9c5t0 arabidopsis
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Q9mzu9 fel's silve
Q9gke0 bos taurus
Q8wnw1 bos taurus
Q8whw1 bos taurus
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Q9d3j3 mus musculu	Q8nhj7 homo sapien	09ttt9 bos taurus	Q8ta74 hemicentrot	044018 leishmania		Q817z9 spinacia ol	Q9luil arabidopsis	Q8cOm7 mus musculu	Q8c128 mus musculu	mus	Bum	l ken	(A)	075064 homo sapien	2943d5 oryza sativ	Q8n158 homo sapien	Q9awj4 oryza sativ	Q8kr32 yersinia ps		Q8ywx3 anabaena sp	017610 caenorhabdi	Q8k4c2 mus musculu	08bpi5 mus musculu	3 syn	=	dros	Q8vd70 mus muscuiu	C17889 caenorhabdi

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Best Local Similarity
Matches 182; Conserva
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C9MZV0;
C9MZV0;
01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Molecular cloning of canine and feline flt3 ligand reveals high degree of similarity to the human and mouse homologue but uniquely long cytoplasmic domain.";

DNA Seq. 11:163-166(2000).

EMBL: AP155148; AAF87088.1; -.

HSSP; P4977; PETE.

InterPro: IPR004213; FET3_lig.
Pfam; PF02947; flt3_lig: 1.

SEQUENCE 294 AA; 32394 MW; 6859917A3B74ABCD CRC54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Elt3 ligand.
Canis familiaris (Dog).
Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae;
NCBL_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDLINE=20358731; PubMed-10902925;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yang S., Sim G.K.;
                                                                                                 61
                                                                                                                                                                                                                                                                                          1 MIVLAPAWSPTASLLLLLLLSPGLRGTPDCSFSHSPISSTFAVTIRKLSDYLLQDYPVTV
                                                                                                                                                                                                                                                                                                                                     1 MTVLAPAWSPTTYLLLLLLL.SSGLSGTQDCSFQHSPISSDFAVKIRELSDYLLQDYPVTV
                                                                                                                                             ASNLQDEELCGGLWRLVLAQRWMFRLKTVAGSKWOGLLERVNTEIHEVTKCAFQPPPSCL
RFVQTNISRLLQETSEQLVALKPWITRONFSRCLELQCQPDSSTLPPPWSPRPLEATAPT 180
                                                                                                 ASNIQDDELCGAFWRLVLAQRWMVRLQAVAGSQMQILLEAVNTEIHFVTFCAFQPLPSCL
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ia; Canidae; Canis.
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Best Local S
Matches 178
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Q9GKE0;
Q9GKE0;
Q1-MAR-2001 (TrEMBLrel.
Q1-MAR-2003 (TrEMBLrel.
Q1-MAR-2003 (TrEMBLrel.
Flt3 ligand isoform-1.
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01-OCT-2000 (TrEMBLrel.
01-OCT-2000 (TrEMBLrel.
01-MAR-2003 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           degree of similarity to the human and long cytoplasmic domain. ; DNA seq. 11:163-166(2000). EMBL; AF155149; AAF87089.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE-20358731; PubMed-10902925;
Yang S., Sim G.K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Felis silvestris catus (Cat).
Eukaryota: Metazoa; Chordata: Craniata; Vertebrata:
Mammalia; Eutheria: Carnivora: Fissipedia; Felidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9MZU9
MEDLINE*20570936; PubMed*11120823; Mwangi W., Brown W.C., Palmer G.H. "Identification of fetal liver tyr
                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9685
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                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                        Bovidae; Bovinae;
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                                                                                                                                                        NCBI_TaxID=9913;
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PF02947; flt3_lig; 1.
NCE 291 AA; 32459 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ASNLQDEELCGGLWRLVLAQRWMERLKTVAGSKMQGLLERVNTEIHFVTKCAFQPPPSCL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RFVQTNISHLLQDTSEQLAALKPWITRRNFSGCLELQCQPDSSTPLPPRSPRALEATALP
                                                                                                                                                                                                                                                                                   (Bovine).
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(Tremburel 23, Last ann
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                                                                                                                                                                                                                  Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
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Pred. No. 1.2e
9; Mismatches
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tyrosine
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   kinase
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Flt3 ligand.
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EMBL: AF282985; AAF99322.1; -.
HSSP: P49771; IETE.
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Bovidae; Bovinae; Bo
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(TrEMBLrel. 20,
(TrEMBLrel. 22,
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76.38;
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Last sequence up
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"Cloning of a cDNA for bovine flt3 ligand."; Submitted (NOV-2000) to the EMBL/GenBank/DDBJ EMBL; AB051841; BAB79634.1; -. InterPro: TPR004213; Flt3_lig. 1. Pfam; PF02947; flt3_lig; 1. SEQUENCE 292 AA; 32388 MW; 2A797E0Cll99CIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LREVQANISHLLQDTHQQLEALXPWITHXNPSRCLELQCQPDSPTLLPPRSPGALGAISU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MTVIAPAMSPTT-YILL:.LLLSSGLSGTODCSFOHSPISSDFAVKIRELSDYLLODYPVT
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                                                                                                                                                                                                     PGPQSPLLLLLLLLLPVALLILATAWCICKWRRRKRTRYPGER
                                                                                                                                  PGPOSPLLLLLLLLPVALLLLATAWCLCRWRRRRRTRYPGER
                TAPOPP---LLLULLLPVGLLLLAAAWGLHWGRTRRKTPRPGEO 220
                                                                LRFVQTNISKLLOETSEQLVALKPWITRQNFSRCLEL@CQPDSSTLPPPWSPRPLEATAP
                                                                                                                                                                                                                                                                         67.2%; Score 835; DB 6; 75.9%; Pred. No. 7.1c-73; tive 12; Mismatches 38
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Result
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                                                                                                                                                                                                                                    Score
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1223
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                                                                                                                                                                                                                                                                                                                                                                                                                          1: /SIDSI/gcgdata/geneseq/geneseqp-embl/AA1981 DAT:
2: /SIDSI/gcgdata/geneseq/geneseqp-embl/AA1982 DAT:
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9: /SIDSI/gcgdata/ge
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AAW67768
AAB20186
ABG74238
AAR66177
AAB20189
AAU02129
AAB20187
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(without alignments)
616.388 Million cell updates/s
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Mouse flt-3 ligand wurine flt-3 ligand Mouse Flt-3 ligand Mouse Flt-3 ligand Mouse Mouse Mouse Flt-3 ligand flt-3 ligand
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ALIGNMENTS

25-MAR-2003 05-AUG-1995 AAR67540 standard; Protein; 231 AA AAR67540; (updated)
(first entry)

Flt-3 ligand; flt3-L; anemia; cancer; AIDS; gene therapy.

Mouse flt-3 ligand.

qs

RESULT 1
AAR67540
ILC AAR6
XX AAR6
XX CAR6
CT 25-M
CT 25-M
CT 05-A
XX
CE MOUS
XX MUS
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FT Pept
FT Doma
FT Doma Domain Doma i.n 24-MAY-1993; 07-DEC-1994 Domain 19-MAY-1994; EP627487-A2 Peptide 93US-0068394. 94EP-0303575 /label: Transmembrane_domain 212...231 /label= Extracellular_domain 189..211 /label= Sig_peptide 28..188 Location/Qualifiers /label= Cytoplasmic_domain

1212.5 1208.5 1006 1004 1004

ABB82382

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Best Local :
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25-AUG-1993;
03-DEC-1993;
07-MAR-1994;
11-MAY-1994;
(IMMV ) IMMUNEX CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA encoding mouse flt3-ligand (flt3-L) was isolated from cDNA library of T-cell line P7B-0.3A4 in CV-1/EBNA-1 cells using a slide autoradiography method. Flt3-L stimulates production of progenitor and stem cells, and can be used e in gene therapy protocols.

(Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                         17-JUN-1997;
                                                                                                                                          Antigen-specific peripheral immune tolerance: flt3-ligand; flt3-L; immunogenic; autoimmune disease; organ transplantation; food allergy;
                                                                                                                                                                           Murine fit3-ligand
                                                                                                                                                                                                                                          AAW67768 standard; Protein; 231 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Isolated
                                              12-JUN-1998;
                                                                   23-DEC-1998
                                                                                       WC9857655-A1
                                                                                                                                  tissue
                                                                                                                                                                                                 25-MAR-1999
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                                                                                                                                 transplantation.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ligands for flt 3 receptors - AIDS and various cancers
                                                                                                                                                                                                                                                                                                                                                    LRFVQTNISHLLKDTCTQLLALKPCIGKACQNESRCLEVQCQPDSSTLLPPRSPIALEAT 180
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P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 231 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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93US-0111758.
93US-0162407.
94US-0209502.
94US-0243545.
                         9705-0877421
                                             98WO-US12085
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
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Best Local S
Matches 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A method has been developed of initiating or enlancing: (i) an antigen-specific immune tolerance or (ii) immunotolerance of a therapeutic immunoquelic molecule by addition of a polypeptide, before, after or with the mucosal administration of an immunotolerising amount of the antigen or therapeutic molecule, respectively. The polypeptide is capable of binding the flt3 receptor and is: a) amino acids 28-x of murine flt3 ligand (flt3-t), where x is an amino acid between 163-231; b) amino acids 28-y of human flt3-L, where y is an amino acid between 160-235; and c) a polypeptide that has at least 90% identity to the polypeptides of either (a) or (b). The method ameliorates the effects of autoimmune diseases, food allergies or organ or tissue rejection following transplantation. Administration of flt3-L allows lower doses of antigens to be used in vivo for mucosally administered antigens. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim
                                                                      Peptide
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                       Domain
                                                                                                             Mus musculus
                                                                                                                                                Flt-3 ligand; Fms-like tyrosine kinase;
immunotherapy; therapy; tumour; cancer;
                                                                                                                                                                                     Mouse Fit-3 ligand
                                                                                                                                                                                                              14-XAY-2001
Doma in
                                              Protein
                                                                                                                                   immunotherapy; therapy; tumour; cancer; melanc
lymphoma; autoimmune disease; infection; yene
                                                                                                                                                                                                                                                             AAB20186 standard;
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DB: AAV81505.
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ce - by using murine or human flt3 ligand
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                                                                                                                                                                                                                                                                                                                         MTVLAPAWSPNSSLLLLLLLSPCLRGTPDCYFSHSPISSNFKVKFRELTDHLLKDYPVI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MTVLAPAWSPNSSLLLLLLLLLSPCLRGTPDCYFSHSPISSNFKVKFRELTDHLLKDYPVT
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nilarity 100.
Conservative
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                                             /label=
28..231
         /label= Mature_protein
28..189
/label= Extracellular_domain
                                                                          Location/Qualifiers
1..27
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                                                         Signal_peptide
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Pred. No. 5.5e-115;
Mismatches 0;
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                                                                                                                                                  melanoma;
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Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein - protein search, using sw model
                                                                                                                                                     Database :
                                                                                                                                                                                                                                                                                                                                                                                                                Searched:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
Issued_Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/packfiles1.pep:*
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Gapop 10.0 , Gapext 0.5
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1223
1 MTVLAPAWSPNSSLLLLLLL......WQRARRRGELHPGVPLPSHP 231
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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No.	Score	Match	Length	В	ID	Description	_,	
ָׁ ב	22	100.0	231	- ;	45-	Sequence 2	2	001:
2	22	0	231	2	-08-993-962-	:0		001
w	1223	100.0	231	w	-09-160-841	Sequence 2		App.
4	22	0	231	5	T-US94-05365-			0011
сп	22	9.	231	_	8-220-379	0		A 00
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11		2.	235	ω	9-160-841-		•	λpp.:
12	•	.2	235	w	9-100-		•	ор.: ; :
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14	ക	2	291	4	US-09-322-409-44		44	Apc:
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17	692	6	212	w	۲	_	•	Appi
18	ന	6.	209	ω	-109-100-	_	•	Pop.
19	686	6	209	ω	9-100-1	۰	4	Apr.
20	മ	6	209	ω	09-100-	_	•	, 2G
21	മ	6.	209	دىي	9-100-1		•	Appl
22	ഹ	.5	209	w	09-100-		•	Appli
23	ന	ŗ	209	w	-109-100-1		2	Appl
24	ന	.5	209	ω	-09-109-100-	Sequence 1	7	0 1
25	œ	Ņ	209	ω	-09-109-100-1	Sequence 1	• `	Acc.
26	679.5	55.6	268	4	-09-322-40	Sequence 2		> :
27	7		268	4	51-527-2		٠	Α̈́ς:

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92	92	92	92	95.5	95.5	95.5	105	135	216	573.5	573.5	666.5	666.5	668	668	678	0/3
7.5	7.5	7.5	7.5	7.8	7.8	7.8	8.6	11.0	17.7	46.9	46.9	54.5	54.5	54.6	54.6	55.4	00.0
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PCT-US95-04570-2	US-09-301-065-2	US-08-841-089-2	US-08-310-912A-2	PCT-US95-04589-142	us-09-301-085-142	US-08-310-912A-142	PCT-US94-05150-10	PCT-US94-05150-12	PCT-US94-05150-17	US-09-451-527-31	US-09-322-409-31	US-09-451-527-49	US-09-322-409-49	US-09-451-527-26	US-09-322-409-26	US-09-109-100-8	05-09-109-100-13
Sequence	Seguence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	apprehense
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ALIGNMENTS

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LENGIH: 231 amino	CHARACTERISTICS:	ATION FOR	LEX: 756822	(206) 233-0644	TELEPHONE: (206) 587-0430	TELECOMMUNICATION INFORMATION:	DOCKE	EGISTRATION NUMBER: 32,655	Malaska, Stephen L.	ATTORNEY/AGENT INFORMATION:	FICATION	ILING DATE: May 24, 199	/80	PLICATION DAT	LASSIFICATION: 435	DATE: August 12, 1993	PPLICATION NUMBER: 08/106,	APPLICATION I	LASSIFICATION: 435	TLING DATE: August 25, 1993	ATION NUMBER: 08/111,	TLING DATE: 03-DEC-1993	APPLICATION NUMBER: IS OR /160	STRUCKTION	LLING DATE: II-	ATTON NUMBER:	DATION DATA:	Microsoft Word, Versio	cint	Apple Macinto	TYPE: Floppy	PUTER	10. 3810	COHUTRY: Mashing Con	ITY: Seattle	TREET: 51 University Street	DURESSEE: Stephen L. Ma	PONDENCE ADDRESS	R OF SEQUENCES: 8	NVENTION: Ligands for	Beckmann M Patric	Ivman Stewart	Ö. 5554512	equence 2,	- 3/12-5/15-	

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> 120 120

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ILFE: amino acid
FOPOLOGY: linear
MOLECULE TYPE: protein
US-08-243-545-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANI: Lyman, Stewart D.
APPLICANI: Beckmann, M. Patricia
TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
NUMBER OF SEQUENCES: 8
                                                                                                                                                                       FILING DATE: December 3, 1993
APPLICATION NUMBER: 08/111,758
FILING DATE: August 25, 1993
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/106,463
FILING DATE: August 12, 1993
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: 08/068,394
                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: Apple Macintosh
OPERATING SYSTEM: Macintosh 7.0.1
SOFTWARE: Microsoft Word, Version #5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: (
FILING DATE: December
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                    REGISTRATION NUMBER: 32,655
REFERENCE/DOCKET NUMBER: 2813-C
TELECOMMUNICATION INFORMATION:
                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: Decem CLASSIFICATION: 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 51 Uni
                  TELEFAX:
                                     TELEPHONE:
                                                                                       NAME: Malaska, Stephen L
REGISTRATION NUMBER: 32,
                                                                                                                                               CLASSIFICATION:
                                                                                                                                                            APPLICATION NUMBER: FILING DATE: May 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Washington
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                    (206) 587-0430
(206) 233-0644
                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER: US/08/993,962
December 18, 1997
                                                                                                                                               May 24, 1993
)N: 424
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US-09-160-841-2
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Patent No. 6
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Best Local Similarity
Matches 231: Conserv
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                                                                                                                                                       PRICE APPLICATION DATA:
APPLICATION NUMBER: 08/106,463
FILING DATE: August 12, 1993
PRICE APPLICATION DATA:
APPLICATION NUMBER: 08/068,394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Lyman, Stewart D.
APPLICANT: Beckmann, M. Patricia
TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
NUMBER OF SEQUENCES: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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LENGTH: 231 amino acid
                                              REFERENCE/DOCKET NUMBER: 28
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: Decembe
                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Microsoft WO CURRENT APPLICATION DATA:
                                                                                                FILING DATE: May 24, 1993
ATTORNEY/AGENT INFORMATION:
NEGLECT MAILASKA, Stephen L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM: Macintosh SOFTWARD:
APPLICATION NUMBER: FILING DATE: August
                                                                                                                                                                                                                                                                                                                                      FILING DATE:
CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Seattle
STATE: Washing
                                                                                     REGISTRATION NUMBER:
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                                 (206) 587-0430
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August 25, 1993
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100.0%; pred. No. 7.7e-119;
tive 0; Mismatches 0;
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Maximum Match 100%
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Maximum DB seq length: 2000000000
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Match
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Gapop 10.0 , Gapext 0.5
     541936 seqs, 145912426 residues
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2: //cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pcp:*
3: //cgn2_6/ptodata/1/pubpaa/US05_NEW_PUB.pcp:*
4: //cgn2_6/ptodata/1/pubpaa/US05_NEW_PUB.pcp:*
5: //cgn2_6/ptodata/1/pubpaa/US05_NEW_PUB.pcp:*
6: //cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pcp:*
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11: //cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pcp:*
12: //cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pcp:*
13: //cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pcp:*
13: //cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pcp:*
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17: //cgn2_6/ptodata/1/pubpaa/US10C_PUBCOMB.pcp:*
18: //cgn2_6/ptodata/1/pubpaa/US10C_PUBCOMB.pcp:*
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US-09-483-806-2
US-09-983-806-2
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US-10-995-449-2
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US-10-262-439-7
US-08-994-468-6
US-09-48-378-1
US-09-983-806-6
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US-09-983-806-6
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Receptors Corporation	Sequence 44, Appl Sequence 19, Appl Sequence 11, Appl Sequence 21, Appl Sequence 21, Appl Sequence 23, Appl Sequence 23, Appl Sequence 24, Appl Sequence 26, Appl Sequence 26, Appl Sequence 27, Appl Sequence 28, Appl Sequence 29, Appl Sequence 29, Appl Sequence 29, Appl Sequence 21, Appl Sequence 21, Appl Sequence 22, Appl Sequence 23, Appl Sequence 24, Appl Sequence 27, Appl Sequence 27, Appl Sequence 28, Appl Sequence 26, Appl Sequence 26, Appl Sequence 27,

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; SOFTWARE: Patent!
; SEQ ID NO 2
; LENGTH: 231
; TYPE: PRT
; ORGANISM: Mus sp.
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APPLICANT: Brasel, Kenneth
TITLE OF INVENTION: Dendri
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Best Local Similarity
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Best Local
                                                                                                                                                                                                                                                                                  Matches
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CURRENT FILING DATE: 199-11-23
NUMBER OF SEQ ID NOS: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear MOLECULE TYPE: protein SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 231 amino acids
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                                                                                                                                                                                                                                                                                                 Similarity
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                  ELPEPRPROLLLLLLLPLTLVLLANAWGLRWQRARRRGELHPGVPLPSHP 23:
                                                                                  LREVQTNISHLLKUTCTQLLALKPCIGKACQNESRCLEVQCQPDSSTLLPPRSPLALEAT 180
                                                                                                                                        VAVNLQDEKHCKALWSLFLAQRWIEQLKIVAGSKMQTLLEDVNTEIHFVTSCTFQPLPEC
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                                                                    LREVQTNISHLLKDTCTQLLALKPCIGKACQNFSRCLEVQCQPDSSTLLPPRSPIALEAI
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                                                                                                                                                                                                                                                                            100.0%; Score 1223; DB 9;
100.0%; Pred. No. 2.1e-108;
tive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                Query Match 100
Best Local Similarity 100
Matches 231; Conservative
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FILING DATE: 19-MAY-1995
APPLICATION NUMBER: US 08/162,407
FILING DATE: 33-DEC-1993
APPLICATION NUMBER: 08/111,758
FILING DATE: August 25, 1993
APPLICATION NUMBER: 08/106,463
FILING DATE: August 12, 1993
APPLICATION NUMBER: 08/068,394
FILING DATE: MAY 24, 1993
APPLICATION NUMBER: 08/068,394
FILING DATE: MAY 24, 1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Microsoft Word, Version CURRENT APPLICATION IDATA:
APPLICATION NUMBER: US/09/983,805
FILING DATE: 25-Oct-2001
CLASSIFICATION: 530
PRICK APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 98101
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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Beckmann, M. Patricia
                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO:
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TITLE OF INVENTION: Ligands for flt3/flk-2 Receptors
    18:
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                                                                                                                  121 LRFVQTNISHLLKDTCTQLLALKPCIGKACQNFSRCLEVQCQPDSSTLLPPRSPIALEAT 180
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COMPUTER: Apple Macintosh
OPERATING SYSTEM: Macintosh 7.0.1
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STATE: Washington
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                                                                             LREVQTNISHLLKDTCTQLLALKPC1GKACQNESRCLEVQCQPDSSTLLPERSP1ALEAT
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REFERENCE/DOCKET NUMBER: 2813-C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 231 amino acids
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Pred. No. 2.1e-108;
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Perfect score:
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FLT3/FLK2 ligand
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MTVLAPAWSPNSSLLLLLLLSPCLRGTPDCYFSHSPISSNFKVKFRELTDHLLKDYPVT 60

Ouery Match Best Local 9 Matches 23

Similarity

100.0%; 100.0%; tive 0;

Score 1223: Pred. No. 3

DB 2; .4e-101; s 0;

Length Indels

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Gaps

Mismatches

Conservative

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RESULT 2
$43291
$43291
$C:Species: Mus musculus (house mouse)
C:Species: Mus musculus (house mouse)
C:Species: Mus musculus (house mouse)
C:Accession: $43291
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C:Accession: $63291
R:Hannum, C:; Culpepper, J.; Campbell, D.; McClanahan, T.; Zurawski, S.; Bazas, J.F.; K.3
Relation, A.; Muench, M.; Kelner, G.; Namikawa, R.; Rennick, D.; Roncarolo, M.G.; Elotnik, A.
Nature 368, 643-648, 1994
A;Title: Ligand for FLT3-yFLK2 receptor tyrosine kinase regulates growth of haemalopoieti
A;Reference number: $43290; MUID:94195428; PMID:8145851
A,Accession: $43291
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R;Lyman, S.D.: James, L.: Escobar, S.: Downey, H.; de Vrios, P.: Brasel, K.: Stocking, Oncogene 10, 149-157, 1995
A;Title: Identification of soluble and membrane-bound isoforms of the murine firs ligal A;Reference number: I58343; MUID:95124710; PMID:7824267
A;Accession: I58343
                                                                                                                                                                                                                                                                       C;Species: Mus sp. (mouse)
C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 05-Nov-1999
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A;Residues: 1-220 <RES>
A;Cross-references: GB:S76459; NID:g913479; PIDN:AAB33059.1; PID:g913480
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flt3 ligand isoform 5H - mouse
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Cispecies: 29-May-1998 #sequence_revision 29-May-1998 #text_change 01-Dec-2000
Cispecies: 38440; 139075; S43292
Cispecies: SD, James, L.; Johnson, L.; Brasel, K.; de Vries, P.; Escobar, S Slood 83, 2795-2801, 1994
A; Fittle: Cloning of the human homologue of the murine flt3 ligand: a growth A; Foference number: 138440; MUID:94235842; PMID:8180375
A; Accession: 138440
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A:Title: Ligand for FLI3/FLK2 receptor tyrosine kinase regulates growth of hae A:Reference number: $43290; MUID:94195428; PMID:8145851
A:Accession: $43292
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Molecule type: mRNA A;Residues: 1-71,/A,/3-235 <HAN> A;Residues: 1-71,/A,/3-235 <HAN> A;Cross-references: GB:U04806; NID:g483844; PIDN:AAA17999.1; PID:g483845 A;Note: the authors translated the codon AGT for residue 25 as Met C;Genetics:
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A;Molecule type: DNA
A;Residues: 1-235 <RE2>
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APTAPQPP---LLLLLLPVGLLLLAAAWCLHWORTKRKTPRPGEQVPPVPSP
                                                                                                                                                                        VASNLQDEELCGGLWRLVLAQRWMERLKTVAGSKMQGLLERVNTEJHFVTKCAFQPPPSC
                                                                                                                                                                                                                                                                                                                                      VAVNLQDEKHCKALWSLFLAQRWIEQLKTVAGSKMQTLLEDVNTEIHFVTSCTFQPLPEC 120
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YN61_YEAST
  VS09_ROTS1
CYB_MYOBR
TNP2_MOUSE
ASA1_ENTEA
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Hannum C., Culpopper J., Campbell D., McClanahan T., Zurawski S.,
Bazan J.F., Kastelein K., Hudak S., Wayner J., Mattson J., Luh J
Bazan J.F., Kastelein K., Hudak S., Wayner J., Mattson J., Luh J
D.da G., Martina N., Peterson D., Menon S., Shanafelt A.,
Muench M., Kelner G., Namikawa R., Rennick D., Roncarolo M.G.,
Ziotnik A., Rosnet O., Dubrenil P., Birnhaum D., Lee F.;
"Ligand for FLT3/FLK2 receptor tyrosine kinase regulates growth
haematopoietic stem cells and is encoded by variant RNAs.";
Nature 368:643-648(1994).
                                                                                                                                                    Oncogene
(5]
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McClanahan T., Culpepper J., Franz-Bacon K., Mattson J., 7
                                                                                                                                                                                       "Identification of soluble and membrane-bound isoforms of flt3 ligand generated by alternative splicing of mRNAs."; Oncogene 10:149-157(1995).
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                                                                                      CONFLICT
CONFLICT
SEQUENCE
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SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROI entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
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Submitted (APR-1996) to the EMBL/GenBank/DDB databases.
-i- FUNCTION: STIMULATES THE PROLIFERATION OF EARLY HEMATOPOIETIC
CELLS. SYNERGIZES WELL WITH A NUMBER OF OTHER COLONY STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MGD; MGI:95560; Flt31.
InterPro: IPR004213; Flt3_lig.
Pfam; PF02947; flt3_lig; 1.
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SUBCELLULAR LOCATION: Type I membrane protein. Two soluble isoforms are also produced by alternative splicing. One of which, isoform 3/E6, is biologically active, while the other, isoform 4/E6Delta16, is inactive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Isold+P49772-3: Sequence=VSP_004254, VSP_004255:
Name=4; Synonyms=E6Delta16:
Isold-P49772-4; Sequence=VSP_004256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Name=2; Synonyms=5H;
IsoId=P49772-2; Sequence=VSP_004253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Name-3; Synonyms-E6;
Iso1d-P49772-3; Sec
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A -> G (IN REF. 1).
MISSING (IN REF. 2)
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N-LINKED (GLCNAC...) (POTENTIAL)

N-LINKED (GLCNAC...) (POTENTIAL)
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LAAAMGLRWQRARRRGELHPGVPLPSHP -> GNGGPRAQH
HGATRLTATALLTVCPGLLLPLVGTSHMFFLPYFLSFLSSF
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Missing (in isof
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VQCQP -> GLIMQARLTLNSKQSSCLSVLSAGIT
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P49771;
01-OCT-1996
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28-FEB-2003 (Rel. 41, Last annotation update)
SL cytokine precursor (Fms-related tyrosine kinase 3 ligand) (Flt3L).
FLT3LG.
                                                                                                                                     Savvides S.N., Boone T., Karplus P.A., "Flt3 ligand structure and unexpected
                                                                                                                                                                                                                                                                                                                                                                                                               Muench M., Kelner G., Namikawa R., Rennick D., Ropcarolo M.G.,
Zlotnik A., Rosnet O., Dubreuil P., Birnbaum D., Lee F.;
"Ligand for FLT3/FLK2 receptor tyrosine kinase regulates growth
haematopoietic stem cells and is encoded by variant RNAs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hannum C., Culpepper J., Campbell D., McClanahan T., 20
Bazan J.F., Kastelein R., Hudak S., Wagner J., Mattson
Duda G., Martina N., Peterson D., Menon S., Shanafe t J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. MEDLINE=94195428; PubMed=8145851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                bundles and cystine knots."; Nat. Struct. Biol. 7:486-491(2000)
                                                                                                                                                                 MEDLINE=20343011; PubMed-10881197;
                                                                                                                                                                                                                                             Lyman S.D.,
                                                                                                                                                                                                                                                           SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING MEDLINE=95032581; PubMed=7556977;
                                                                                                                                                                                                                                                                                                                                                                                                    Nature 368:643-648(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human)
                                                                                                                                                                                                       "Structural analysis of human 
Oncogene 11:1165-1172(1995).
                                                                                                                                                                                                                                  Escobar S.
                                                                                                                                                                                X-RAY CRYSTALLOGRAPHY (2.2 ANGSTROMS).
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secreted (isoform 2).
ALIERNATIVE PRODUCTS:
Event=Alternative splicing: Named isoforms*2:
Name-1: Synonyms=Mcmbrane bound;
                                    FACTORS AND INTERLEUKINS.
SUBUNIT: Homodimer (isoform
SUBCELLULAR LOCATION: Type ]
secreted (isoform 2).
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Eukaryota; Metazoa: Chordata; Craniata: Vertebrata: Euteleostomi;
Mammalia: Eutheria: Rodentia: Sciurognathi; Muridae: Murinae: Mus
NCBI_TaxID-10090;
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Submitted (DEC-1995) to the EMBL/GenBank/DDBJ databases.
EMBL; U44024; AAA93305.1;
HSSP; P49771; IEFE.
MGD; MGI:95560; F1t31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       McClanahan T., Culpepper J., Campbell D., Wagner J., Franz-Bacon K., Mattson J., Tsai S., Luh J., Guimares M.J., Mattei M.-G., Rosnet O., Birnbaum D., Hannum C.;
"Flt3 ligand: expression, genomic organization, alternatively spliced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
   6,1
                                     61 VAVNLQDEKHCKALWSLFLAQRWIEQLKTVAGSKMQTLLEDVNTEIHFVTSCTFQPLPEC
                                                                                                                                       VAVNLQDEKHCKALWSLFLAQRWIEQLKTVAGSKMQTLLEDVNTEIHFVTSCTFQPLPEC
                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                       71.9%;
98.2%;
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01,
23,
                                                                                                                                                                                                                                                                                      Score 879; DB 11; Length 17
Pred. No. 1.2e-81;
1; Mismatches 2; Indels
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Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                            04F0A010171E3384 CRC64;
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                                                                                                                                                                                                                                                                                                                                                         Length 172;
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Q9H665 Q9BGY6 Q9L3R0

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RESULT 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вb
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
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Best Local S
Matches 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Strausberg R.;
Submitted (DEC-2001) to the EMBI
EMBL; BC019801; AAH19801.1; -
MGD; MGI:95560; Flt31.
InterPro: IPR004213; Flt3_lig.
Pfam; PF02947; flt3_lig; 1.
                                                                                                                                                                                                                                                                                                            Q9GKE0 PRELIMINARY; PRT; Q9GKE0; O1-MAR-2001 (TrEMBLrel. 16, Created) O1-MAR-2001 (TrEMBLrel. 16, Last sequence of the ligand isoform-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OBVCH4:
01 MAR-2002 (TrEMBLrel. 20, Created)
01 MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
Similar to FMS-like tyrosine kinase 3 ligand.
                                                                                                                                                                                                                                                        Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostcmi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoldea
                                        J. Immunol. 165:6966-6974(2000).
EMBL; AF282985; AAF99322.1; -.
HSSP; P49771; 1ETE.
                                                                                             Mwangi W., Brown W.C., Palmer G.H.:
"Identification of fetal liver tyrosine
required for receptor binding and functi
ligand isoforms.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8VCH4
                                                                                                                                                                                                                            Bovidae; Bovinae;
NCBI_TaxID-9913;
                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE-20570936; PubMed-11120823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                       InterPro;
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 IPRO04213: Flt3_lig, 2947; flt3_lig; 1.
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ilarity 92.5%;
Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL/GenBack/DDBJ
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                                                                                                                  function
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Best Local Similarity
Matches 165; Conser
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Best [ocal
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O1-MAR-2002 (TrEMBLrel. 2
O1-MAR-2002 (TrEMBLrel. 2
O1-OCT-2002 (TrEMBLrel. 2
Flt3 ligand.
                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (NOV-2000) to the EMBI/GenBank/DDBJ da
EMBL; ABC5.841; BAB79634.1; -.
InterPro; IPR004213; F113_lig.
Pfam; PF02947; f113_lig; 1.
SEQUENCE 292 AA; 32388 MW; 2A797E0C1199CID9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
NCBI_TaxID-9913;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Cloning of a cDNA for bovine flt3 ligand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
Hikono H., Momotani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FLT3 LIGAND
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                                                                                                                                                     LREVQTNISHLLKUTCTQLLALKPCIGKACQNFSRCLEVQCQPDSSTLLPPRSPIALEAT
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SLPGPQSPLLLLLLLLLPVALLLLATAWCLCRWRRRRTRYPGERRRTLRPRESSHLPA
                                                                           ELPEPR-PRQLLLLLLLLLPLTLVLLAAAWG:-RWQRARRR-
                                                                                                                                 LRFVQANISHLLQDTHQQLEAT,KPWI--THRNFSRCT,ELQCQPDSPTLLPPRSPGALGAT
                                                                                                                                                                                                                                                                             MVVLAPAWSPTTSLLLLLLLSPGLQGTPDCSFRHSPISSTFAIKIGKLSKYLLQDYPVT
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                                                                                                                                                                                                                                                                                                                                                     Conservative
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                                                                                                                                                                                                                                                                                                                                                                    63.3%; Score 774.5; DB 6 62.8%; Pred. No. 9.6e-71;
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